GEOGRAPHIC NEWS BULLETINS

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(The National Geographic Society is a scientific and educational Society, wholly altruistic, incorporated under the Federal law as a non-commercial institution for the increase of geographic knowledge and its popular diffusion.)

General Headquarters, Washington, D. C.

Contents for Week of October 5, 1931. Vol. X. No. 13

NOTE TO TEACHERS.—This is the first issue of the Geographic News Bulletins for the school year, 1931-32. No Bulletins were issued during the summer vacation months.

1. Belize, Hurricane-Wrecked Capital of British Honduras.
2. Belgium Escapes Economic Slump.
3. Production of Manganese, Essential Metal, Now an American "Ghost" Industry.
4. Tree-Ring Calendar Wins Award for Scientist.
5. Handful of American Potatoes Saved Million Chinese.

See Important Notice Following Bulletin No. 5.

© *Photograph by Gevaert*

A FLEMISH FISHERMAN

Frans Hals would have delighted in this sturdy son of the sea. Flemish people are in the majority in Belgium, and speak a language of their own (See Bulletin No. 2).

HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic News Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers for one year upon receipt of 25 cents (in stamps or money order). Entered as second-class matter, January 27, 1922, at the Post Office at Washington, D. C., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized February 9, 1922.

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Belize, Hurricane-Wrecked Capital of British Honduras

THE most disastrous hurricane of 1931 swept giant waves inland from the Caribbean Sea early in September, almost totally destroying the picturesque city of Belize, capital of British Honduras. More than 1,500 lives and property damage amounting to several hundreds of thousands of dollars was the toll of a terrific windstorm which wrought its destructive work in a single afternoon.

Belize, with a population of only 12,660 people, would be a small town elsewhere, but it is the metropolis of England's section of the dense, tropical jungles in the southeast sector of the Yucatan Peninsula.

Uses American Money

Although Belize is unmistakably British in appearance, the houses of two and three stories that line the main residential streets being of accepted British architecture, many of the British leaders of the colony complain that it is becoming "Americanized." Newspapers and magazines from the United States far outnumber those from England, while the official money unit of British Honduras is the American gold dollar.

The British flavor of the country is as much diluted by tropical influences, however, as by American. Coal-black policemen are clothed much like the London "Bobby," and speak with the same broad, Cockney accent. Like the Dutch colony of Curaçao, British Honduras is a safe haven for refugee political leaders of neighboring lands. Consequently one finds in Belize many Central and South Americans of more or less fame, influence and money, who impart an atmosphere of intrigue and romance to the otherwise sleepy, work-a-day life of the place.

Geographic names tell of the sudden transition from the near-by lands of Spanish culture to this little patch of the Spanish Main that has been Anglicized. One leaves Puerto Cortes, Honduras, or Puerto Barrios, Guatemala, to sail a few miles on the Caribbean Sea to the Coxcomb Mountains, All Pines and Stann Creek. Inland, surrounded by Spanish names in Mexico and Guatemala, are Orange Walk and Middlesex.

"Haul-Over" Ferry

Belize is one of the exceptions, and even that is said to be a corruption of the surname of an early Scotch settler, Wallis. Nothing could be more English, however, than the name of the ferry in Belize, which is called "Haul-over."

The mahogany industry, justly commemorated on the flag of British Honduras by the tools of the trade, lured the earliest settlers to Belize in the eighteenth century, put money in their pockets, furnished something for them and their backer, Great Britain, to fight the Spaniards about; and to-day is responsible for the main industry of Belize and British Honduras—lumbering.

The people of Belize tell how the lowest portions of their city, once a seemingly bottomless swamp, have been filled in and made usable by the millions of mahogany chips hacked there from logs which must be roughly squared before they are ready for market.

Belize was settled by British "squatters." Spain, from the days of the earliest explorers, claimed the entire "Main," or mainland, but she was interested chiefly in gold and silver; mere trees seemed beneath notice. So the British, cutting trees

© Photograph by Alexander Stewart

BRUGES, A BELGIAN VENICE, FROM ONE OF ITS MANY CANALS

Everywhere in Bruges the Singing Tower—the Belfry—dominates the view. It was in this quaint old Flemish city that the poet Longfellow, traveling in 1842, came under the spell of its carillon, and wrote "The Belfry of Bruges" (See Bulletin No. 2).

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Belgium Escapes Economic Slump

BIG countries, big resources, big industries and big production do not always spell prosperity. Tiny Belgium, one of the smallest nations in the world, if we may exclude its huge African possession, Belgian Congo, is reported to be in excellent financial condition. In the midst of almost world-wide economic depression Belgian government bonds are selling above par, and her industries, rebuilt on modern lines after war devastation, have redoubled their output.

No country injured by the World War set about more earnestly to achieve reconstruction than Belgium, the one which suffered most cruelly and dramatically from the conflict. Though the damage done to the country through property destroyed, pillage, and financial exactions by the Germans reached a tremendous sum, the people, with characteristic industry and thrift, took up the heavy task of reviving their country's industrial life as soon as the Armistice had been signed.

By the beginning of 1920 they had made such great strides that, with the exception of the steel and glass industries, production averaged three-quarters or more of pre-war production; the coal output had even reached 94 per cent and the refined sugar output, 100 per cent.

In Area, Texas Equals 22½ Belgiums

Belgium today has an area less than one-fourth as great as Mississippi, and yet it has four times the population of that State. Twenty-two and a half countries like Belgium would be required to make a State the size of Texas, and if Texas were as densely populated as Belgium it would have as many people as the United States and Germany together now possess. If the entire United States had as many people to the square mile as Belgium—that is, continental United States, exclusive of Alaska—we would have more people here than there are in the entire world to-day.

It must follow from this that such a vast population, living within such narrow confines—8,000,000 souls within an area of 11,752 square miles—must be a frugal people, accustomed to self-denial, skilled in the art of economical living, and masters of intensive industry; yet with all this density of population, with all their forced economy, they are a people who so order their relations with one another and with their government that happiness and contentment seem to dwell with them, and this in spite of diverse descent and diverse tongues.

Flemings and Walloons

Within Belgium's small territory—smaller in area than Massachusetts and Connecticut—there are nearly three million Flemings who cannot talk with their compatriot Walloons, and about as many Walloons who cannot hold converse with their countrymen Flemings. In their habits of mind and their methods of gaining a livelihood the two peoples differ as widely as the English and the French, and in their speech they are as different as the Germans and the Scandinavians; and yet there is a tie that has bound them together for generations, with never a fratricidal war in their modern history. That tie is the bond of religion, for they all subscribe to the doctrines of the Church of Rome with a heartiness that makes them one of the best-loved peoples of the Holy See.

Their tongues are Flemish and French, and only 10 per cent of the people can speak both. The Flemish influence never crossed the Meuse River toward the

on the eastern coast of Yucatan, the present British Honduras, and in the Mosquito country, farther south, were not molested at first.

When the settlers were seen to be making a good thing of their mahogany trade, the Spanish changed their policy and began harassing them. A series of wars and treaties between Spain and England followed. In 1798 the Spaniards, attacking Belize, were driven off by British settlers with cannon mounted on rafts and flatboats. In 1862 the "settlement" was declared a "colony," and was given a lieutenant governor acting under the governor of Jamaica. In 1884 it became a separate crown colony.

Source of Fruits and Chicle

In addition to mahogany and logwood Belize carries on an active trade with the United States in bananas, coconuts, citrus fruits, cacao, and thousands of bales of chicle, the latter the raw material of chewing gum. Great Britain and Canada divide the small part of the colony's trade that does not go to the United States. In addition British Honduras is one of America's best Central American customers, buying nearly $2,000,000 worth of our products in 1929.

There is much of tropical scenic beauty in Belize. Its nearby coast region is a maze of intensely blue lagoons and channels of calm water—a paradise for the yachtsman and pleasure-boatman. Everywhere are gem-like coral islands covered with coconut trees, which in many cases grow to the water's edge and hang mirrored in the surface.

Belize has a small, complete airport and a landing stage for the big amphibian boats of the Pan-American airways. It is connected with the outside world by a high-power radio station.

Note: British Honduras was visited by Col. Charles A. Lindbergh, in his epochal flight through Central and South America, and the West Indies, in 1928. See his account of the air voyage and his stop in Belize in the May, 1928, *National Geographic Magazine*, "To Bogotá and Back by Air." See also "Flying the World's Longest Air-Mail Route," March, 1930.

Bulletin No. 1, October 5, 1931.

© *Photograph by Keystone*

BELIZE, BEFORE THE BIG WINDS BLEW

The capital of British Honduras occupies both banks of the Belize River at its entrance into a lagoon, which in turn empties into the Caribbean Sea. The Crown Colony of British Honduras is about the size of the State of Massachusetts but has only 50,000 people. Belize had 12,660 people before the recent hurricane.

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Production of Manganese, Essential Metal, Now an American "Ghost" Industry

FOREIGN competition and price-cutting have temporarily added the American manganese business to such "ghost" industries as brewing, carriage-making, whaling and livery stabling. The closing down of the last of fifteen centers turning out manganese ores in this country is due primarily, producers say, to greatly increased Russian production and the sale of the metal in American ports at prices below the cost of manufacture here.

The various ores of manganese, one of the essential ingredients of fine steel, glass, and certain kinds of paint, are found in all the continents, and in large quantities in the United States. Men and animals, needing minute quantities of manganese to sustain health, eat and drink compounds of the metal in their food and water, while plants absorb the mineral from the earth.

Babies Born with Store of Manganese

Babies are born with a sufficient supply of manganese to last until they are put on a "heavy" diet, for milk does not supply the mineral. Nature stores manganese in seeds, which supply lasts until sprouts can procure their own needs from the earth. Without sufficient manganese, plants will not bear fruit. In soil minus manganese, plants perish when the original supply in the seeds is exhausted. Thus, as a fertilizer, manganese is increasingly popular among farmers.

If a radio set is not of the "plug in" type, a manganese compound, hidden in dry cell batteries, helps bring the voice of the radio entertainer into the living room. Press the button on a flashlight and manganese is put to work, and if the doorbell and servants' buzzer are not connected with the house current, dry batteries, containing manganese, are utilized.

Whitens Glass but Colors Calico

Manganese makes window glass and automobile plate glass white and clear. Most glass-making materials contain a small quantity of iron, which produces a brownish tint in finished glass. Chemical action induced by manganese causes the undesirable tint to fade. The mineral also colors glass from a pale purple to black, depending upon the quantity introduced. Manganese-colored glass ornaments adorn many American mantels and cabinets.

When the home owner uses dark-hued paint, manganese may have helped to produce the color of his choice; moreover, manganese may be an element that makes the paint dry quickly. Manganese also helps produce the color in printed calico and polychrome jars.

Permanganate of potash, a wood preservative, bleacher of textiles, and a disinfectant, contains manganese.

Purifies and Hardens Steel

Withal, more than 90 per cent of the manganese of commerce is consumed in the steel factory. Metallic manganese is light gray in color. The metal is not used alone, but is mixed with iron and then dumped into a vat of molten steel. It diminishes impurities in steel, rids the molten metal of bubbles that are called "blow holes" when the metal is cooled, and makes finished steel harder.

east, and the Walloon influence reached but a short distance toward the west from that beautiful valley. The line of demarcation between the two peoples is rather sharply marked.

There is a physical difference between the Walloons of eastern Belgium and the Flemings of western Belgium, just as there is a difference of tongue and stock. The Walloons are of stouter build and greater stature, and are dark where the Flemings are fair, thus bespeaking the commingling of Spanish blood. On the other hand the Flemings are the more industrious of the two peoples, and their women are said to be able to prepare the best meals out of the fewest things of almost any race in the world.

Engines for the Panama Canal

Belgium is noted for its manufacturing enterprises. At Seraing, a suburb of Liege, are located the vast works of Cockerill, where many of the famous Belgian engines which rendered such wonderful service on the Panama Canal were built. This plant was destroyed by the Germans but has been in large part rebuilt. It covers 260 acres of ground and gave employment to 15,000 people.

Besides machinery, Belgium produces great quantities of structural steel, textiles, glass, crockery and numerous other products.

Note: For supplementary reading and photographs, both in color and black-and-white, see the following articles in the *National Geographic Magazine*: "Beautiful Belgium Restored by Peace," November, 1929; "Through the Backdoors of Belgium," May, 1925; "The Singing Towers of Belgium and Holland," and "Looking Down on Europe," March, 1925; and "The Battle Line of Languages in Western Europe," February, 1923.

Bulletin No. 2, October 5, 1931.

© *Photograph by Nels*

A GIRL MINE WORKER IN THE "BLACK COUNTRY"

Up to twenty years ago Belgian women were permitted to work in the mines. Now they can work only on the surface. More than 150,000 workers are engaged in the coal mining industry, and of that number two-thirds are employed underground. Other important industries of Belgium are sugar refineries, distilleries and breweries, the manufacture of glass, motor cars, iron and steel, lace, and artificial silk.

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Tree-Ring Calendar Wins Award for Scientist

DISCOVERY of a method of constructing one of the most unusual calendars in existence from tree rings—literal "finger prints of time"—has brought to Dr. Andrew Ellicott Douglass the research corporation prize of $2,500, one of the highest research awards of the Smithsonian Institution at Washington.

Dr. Douglass pieced together his unique yardstick of time after seven seasons of field work as leader of the pre-Columbian Beam Research Expedition of the National Geographic Society, which undertook the work primarily to establish the date of the construction of Pueblo Bonito, earliest of the American "apartment houses" of northern New Mexico.

Pushed History of U. S. Back Eight Centuries

In the report of his work to the National Geographic Society Dr. Douglass wrote:

"By translating the story told by tree rings, we have pushed back the horizons of history in the United States for nearly eight centuries before Columbus reached the shores of the New World, and we have established in our Southwest a time-table for that period more accurate than if human hands had written down the major events as they occurred.

"We are now able to announce the important dates in the history of Pueblo Bonito, oldest and largest of the great Indian communities, in Chaco Canyon, New Mexico.

"Furthermore, we can now date nearly forty prehistoric ruins in the Southwest and reconstruct the succession of major events through which Indian settlements rose, passed their heyday, and disappeared.

Tree Rings Rosetta Stone of New World

"Just as the far-famed Rosetta Stone provided the key to the written mysteries of ancient Egypt, so the collection of an unbroken series of tree rings has made clear the chronology of the Southwest.

"Through this work we have learned of some outstanding events in America which took place at the time of the conquest of Spain by the Moors, and we know that certain Pueblo Indian settlements were enjoying their golden ages when William the Conqueror faced Harold the Saxon at the Battle of Hastings.

"These researches have carried the calendar back to A.D. 700 in the Southwest, and they have provided the beginnings of a continuous weather chart for 1,200 years. The earliest beam we recovered from Pueblo Bonito was cut A.D. 919 from a tree that was 219 years old when cut. Pueblo Bonito had reached its golden age in 1067 and was still occupied in 1127.

"The method used in extending the historical calendar of the Southwest is the result of a long attempt to read the diaries of trees. Every year the trees in our forests show the swing of Time's pendulum and put down a mark. They are chronographs, or recording clocks, by which the succeeding seasons are set down through definite imprints. Every year each pine adds a layer of new wood over its entire living surface of trunk and branches.

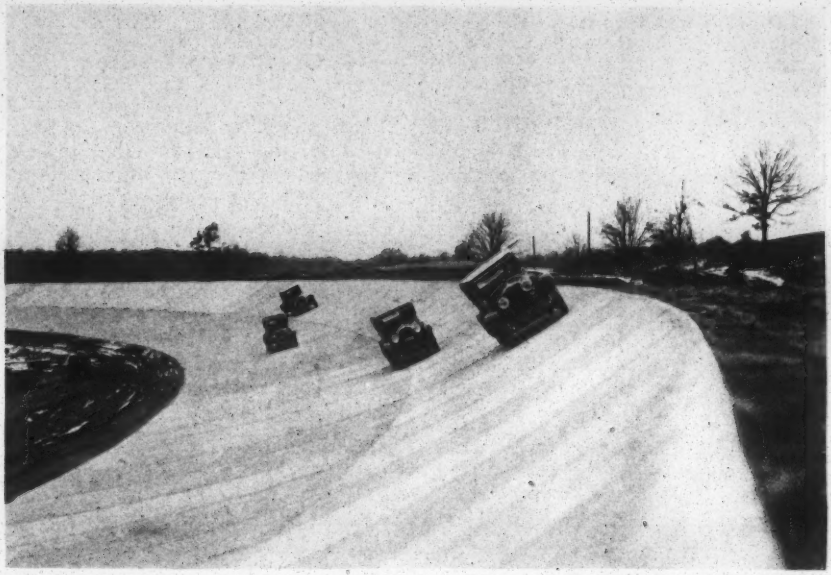
In the form of manganese-iron alloy and manganese steel, manganese protects thousands of people in a single building with a modern structural steel frame; it passes them on the city streets in the form of automobile wheels, chassis, springs and engines. Manganese steel street car wheels roll on tracks containing manganese. Many parts of locomotives and railroad cars are manganese steel and the safety of commuters is enhanced by manganese in steel rails. In the World War the mineral was a constant companion of the American soldiers in France for it was an ingredient in their "tin" hats, army tanks, and various types of armor plate.

When Nature distributed manganese, she was no respecter of continents except that some regions of each continent were allotted a larger supply than others. Mines in the Caucasus Mountains are the world's greatest producers of manganese. Indian mines have, in the past, jockeyed with those of the Caucasus for first position. Large deposits also are worked on the African Gold Coast, in Brazil, and in Cuba. New Cuban mines, opening in January, are scheduled to produce 100,000 tons of ore a year.

The first manganese mine in the United States was opened in Virginia 99 years ago. Montana, until recently, led in production. The American steel industry, chief consumer of manganese, uses 700,000 tons in normal times.

Note: See "Michigan, Mistress of the Lakes," *National Geographic Magazine*, March, 1928; "Pennsylvania, Industrial Titan of America," May, 1919, and "Industry's Greatest Asset —Steel," August, 1917.

Bulletin No. 3, October 5, 1931.



© *Photograph from General Motors*

TWO MILES A MINUTE IN STOCK CARS!

The east end of a high-speed test track in a 1,250-acre proving ground near Pontiac, Michigan. Such speed trials would not be safe if the cars lacked the strengthening qualities of manganese in their steel frames, axles, and engine parts. On this track several makes of cars and trucks are tested for speed, power, steering, and gasoline and oil consumption.

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Handful of American Potatoes Saved a Million Chinese

ONE of the greatest floods in Chinese history is slowly subsiding in central China along the Yangtze River. Hundreds of thousands of acres of farmland and growing crops lie buried under silt and mud, and millions of people face starvation if food from the outside world is not sent to them.

The biblical miracle of the loaves and the fishes was somewhat paralleled in real life during the recent famine in Kansu Province—which lies north of the present famine area—according to a communication to the National Geographic Society from William W. Simpson, Tennessee missionary, whose son acted as guide and interpreter for Dr. Joseph F. Rock, National Geographic Society explorer.

A handful of potatoes sent from America, 25 years ago, planted and extensively propagated by Christian missionaries in this remote part of China along the Tibet border, saved the lives of more than a million Chinese when the district was ravaged by drought and famine, Mr. Simpson writes.

Chinese Saved the Worst for Seed

When the first Americans and Europeans penetrated Kansu Province, and established mission stations in Taochow (Old City), some forty years ago they found a native Chinese potato which was small, poor, and had a very low food value. The natives of the district, with little regard for the future, had been in the habit each year of eating the best of the crop and saving the poorest potatoes for seed.

A letter of appeal to the United States brought four Early Rose potatoes from Tennessee, and these were planted in 1897, two in Taochow and two in Minchow. They grew very well and produced many tubers of fine quality in Chinese soil. The missionaries kept all that were produced the first year for seed. The next year, however, the crop was divided with the Chinese, who were taught how to cut up the large potatoes for seed in order to maintain the quality of the crop.

Boxer Rebellion Intervenes

In a few years the new variety spread to several counties of the province, which had a total population of some 10,000,000 people. But the Boxer Rebellion resulted in a recall of all the Christians from the district and while they were away the Chinese fell back into their old habit of eating all the best, and also of allowing the new variety to become mixed with the diseased older type of potato.

The flavor and food value of the potato plantings had so deteriorated when missionaries were again operating in Kansu that Mr. Simpson decided to send for fresh tubers from America. Friends in Massachusetts forwarded a mere handful of Green Mountain potatoes, which were planted in 1903. The experience of Chinese planters with the earlier American variety helped to speed the distribution of the Green Mountain tubers, which quickly supplanted both the natives and the Early Rose types.

In the three years' famine since 1928, one of the worst famines the world has ever known, almost half the population of Kansu, and also of the Province of Shensi, to the east, have died. But where the Green Mountain potato was

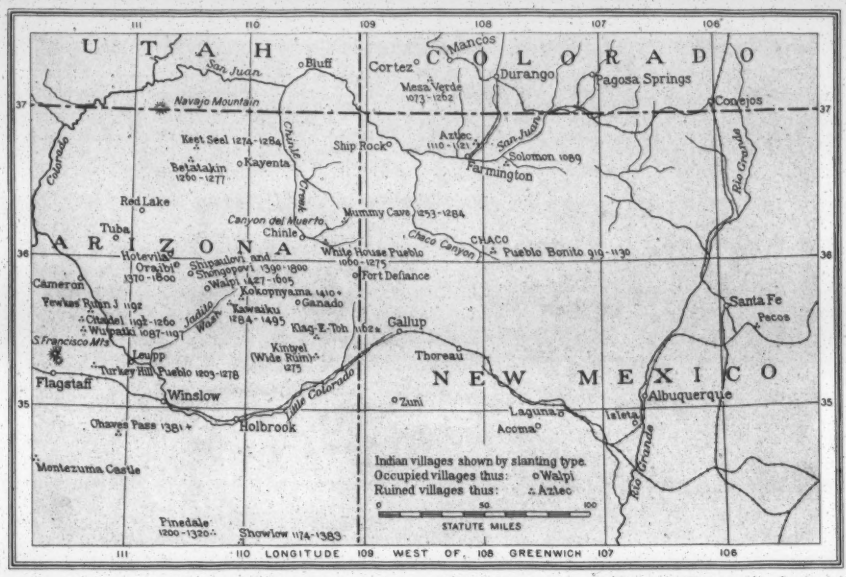
Lean Years, Lean Rings; Fat Years, Fat Rings

"If every year were exactly the same, growth rings would tell the age of the tree and little more. Only in rare cases would they record exceptional events of any interest to us. But a tree is not a mechanical *robot;* it is a living thing, and its food supply and adventures through life all enter into its diary. A flash of lightning, a forest fire, insect pests or a falling neighbor may make strong impressions on its life and go into its diary.

"But in the arid regions of our Southwest, where trees are few and other vegetation scarce, the most important thing to man and trees is rainfall. This fact has helped vastly in our dating work, for certain sequences of years are easily recognized from tree to tree, county to county, and even from State to State."

Note: Students interested in archeology and prehistoric life in America should consult "The Secret of the Southwest Solved by Talkative Tree Rings," *National Geographic Magazine,* December, 1929; "Everyday Life in Pueblo Bonito," September, 1928, and "The Pueblo Bonito Expedition of the National Geographic Society," March, 1922.

Bulletin No. 4, October 5, 1931.



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TREE RINGS HAVE GIVEN DEFINITE DATES TO THESE INDIAN RUINS

In many instances one group name is applied to several ruins. For example, in the Chaco group, various portions of Pueblo Bonito were under construction at different times—919, 1017, 1033-92, 1102, and 1130; Pueblo del Arroyo was being built in 1052-1103. In the Mesa Verde group, Cliff Palace is dated 1073; Oak Tree House, 1112; Spring House, 1115; Balcony House, 1190-1206; Square Tower House, 1204, and Spruce Tree House, 1216 and 1262. Cliff dwellings in Grand Gulch, Utah, were found.

cultivated the larger part of the population has been able to subsist. It has been estimated that fully a million people have been living by eating these potatoes.

Where American potatoes had not been cultivated the people resorted to the bark of trees, roots of grass and insects. As these could not long sustain life the people depending upon them became easy victims of disease and pestilence. In a few limited areas, where wheat and rye had been introduced by missionaries, these cereals proved of great assistance in famine time. In many regions where Chinese wheat had been entirely killed off by blight the newer American varieties flourished, apparently not being susceptible to the same diseases as were the Chinese varieties.

Mr. Simpson's son, William E. Simpson, also a missionary, served as guide and interpreter for Dr. Joseph F. Rock, National Geographic Society explorer, during his search for the Mountains of Mystery in 1929, when Dr. Rock's expedition penetrated the unknown Amayi Machen range near the China-Tibet border.

Note: A description of the mystery plays and strange butter festivals of Kansu Province of China is included in "Life among the Lamas of Choni," *National Geographic Magazine*, November, 1928. See also "The Chinese: Farmers Since the Days of Noah," April, 1927, and "The Geography of China," June, 1927.

Bulletin No. 5, October 5, 1931.

A Gift to Education—How Teachers May Cooperate

THE GEOGRAPHIC NEWS BULLETINS are a gift of the National Geographic Society to education. This is the first issue of 30 numbers, each containing five illustrated Bulletins, to be mailed weekly during the current school year. The Bulletins report the geography of recent events of world importance.

Because these Bulletins represent a substantial gift to schools from The Society's educational fund, the expense of advertising or circulation promotion cannot be undertaken as would be the case with a commercial publication. The Society must rely upon supervisory officials and teachers to call them to the attention of their colleagues who might use them effectively. This should be done promptly so that applicants may be put upon the mailing list to receive the early issues.

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